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IN THE CLAIMS

Claims 1-17 (Canceled)

Claim 18 (Currently amended): An apparatus of ring-back constriction, coupled to a transmission line, for constricting a ring-back effect, the apparatus comprising:

a comparator, coupled to the transmission line, for comparing a line signal on the transmission line with a reference voltage, and accordingly outputting a comparison signal;

a termination controller, coupled to the comparator, for outputting a termination control signal according to the comparison signal;

a termination variable resistor, coupled to a termination voltage and the transmission line, the resistance of the termination variable resistor being adjusted according to the termination control signal for providing a voltage to the transmission line;

a constriction controller, coupled to the comparator, for outputting a constriction signal; and

a transistor, having a gate and a source, the gate receiving the constriction signal, the transistor being coupled to a constriction voltage and the transmission line, the resistance of the transistor being adjusted according to the voltage difference between the gate and the source;

wherein when the level of the line signal changes from a high voltage level to a low voltage level, the level of the constriction signal successively changes from a first voltage level to a second voltage level to turn on the transistor, maintains the second voltage level for a delay period, and returns to the first voltage level;

wherein after the level of the line signal changes from the high voltage level to the low voltage level, the transistor is turned on to provide the constriction voltage to the transmission line, so that the level of the transmission line is pulled up to reduce the undershot and thus the ring-back effect is constricted;

wherein the constriction voltage is larger than the low voltage level.

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Claim 19 (Previously presented): The apparatus according to claim 18, wherein the constriction voltage is larger than the termination voltage.

Claim 20 (New): The apparatus according to claim 18, wherein, when the line signal is at the high voltage level, the resistance of the termination variable resistor is of a low resistor value; and when the line signal transits from the high voltage level to a level lower than the reference voltage, the comparison signal transits to a low comparison-signal level, and then the termination controller outputs the termination control signal according to the comparison signal to change the resistance of the termination variable resistor from the low resistor value to a high resistor value.

Claim 21 (New): The apparatus according to claim 18, wherein, when the comparison signal transits from a high comparison-signal level to a low comparison-signal level, the resistance of the termination variable resistor begins to increase, and the resistance reaches a high resistor value after a transition period.

Claim 22 (New): The apparatus according to claim 18, wherein, when the line signal is at the high voltage level, the resistance of the transistor is of a high resistance value; and when the line signal transits from the high voltage level to a voltage level lower than the reference voltage, the comparison signal transits to a low comparison-signal level accordingly, then the constriction controller outputs the constriction signal according to the comparison signal to adjust the resistance of the transistor to a low resistance value, and after the delay period, the resistance of the transistor transits from the low resistance value to the high resistance value.

Claim 23 (New): The apparatus according to claim 22, wherein, when the comparison signal transits from a high comparison-signal level to the low comparison-signal level, the resistance of the transistor transits from the high resistance value to the low resistance value, and after the delay period, the resistance of the transistor begins to rise, and reaches the high resistance value after a transition period.

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Claim 24 (New): The apparatus according to claim 18, wherein, the termination controller comprises a weak transistor and the weak transistor takes a transition period to change the resistance of the termination variable resistor from a low resistor value to a high resistor value.

Claim 25 (New): The apparatus according to claim 24, wherein the weak transistor is a PMOS transistor.

Claim 26 (New): The apparatus according to claim 18, wherein the constriction controller comprises a weak transistor and the weak transistor takes a transition period to change the resistance of the transistor from a low resistance value to a high resistance value.

Claim 27 (New): The apparatus according to claim 26, wherein the weak transistor is a PMOS transistor.

Claim 28 (New): The apparatus according to claim 18, wherein the termination variable resistor comprises a PMOS transistor.

Claim 29 (New): The apparatus according to claim 18, wherein the transistor comprises a PMOS transistor.

Claim 30 (New): The apparatus according to claim 18, wherein the reference voltage is 1 volt.

Claim 31 (New): The apparatus according to claim 18, wherein the termination voltage is 1.5 volt.

Claim 32 (New): The apparatus according to claim 18, wherein the constriction voltage is higher than the termination voltage.

Claim 33 (New): The apparatus according to claim 18, wherein the range of the constriction voltage is from 2.5 volt to 2.6 volt.

Claim 34 (New): The apparatus according to claim 18, wherein the transmission line is in a GTL+ (Gunning Transistor Logic Plus) bus.

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